

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-19 (Canceled)

20. (Currently Amended) A process for producing dicarboxylic acids comprising:

(a) by oxidation with oxygen or a gas containing oxygen of producing a dicarboxylic acid by oxidizing a cycloaliphatic hydrocarbon with oxygen or a gas containing oxygen in the presence of a reaction medium comprising an oxidation catalyst and of an a lipophilic oxidation solvent that is lipophilic in nature, and

(b) comprising the step of extracting the dicarboxylic acids acid formed in the oxidation step by carrying out, in liquid phase, an extraction of the diacids using a first extraction solvent in which at least the oxidation solvent and the cycloaliphatic hydrocarbon are insoluble.

21. (Currently Amended) [[A]] The process according to Claim 20, wherein the lipophilic oxidation solvent that is lipophilic in nature is a monocarboxylic acid.

22. (Currently Amended) A process according to Claim 20, for producing dicarboxylic acids comprising:

(a) producing a dicarboxylic acid by oxidizing a cycloaliphatic hydrocarbon with

oxygen or a gas containing oxygen in a reaction medium comprising an oxidation catalyst and a lipophilic oxidation solvent, and

(b) extracting the dicarboxylic acid formed in the oxidation step wherein the extraction of the diacids is carried out in a countercurrent-flow liquid/liquid extraction column using a first extraction solvent in which at least the oxidation solvent and the cycloaliphatic hydrocarbon are insoluble.

23. (Currently Amended) [[A]] The process according to Claim 20, wherein the reaction medium derived from the oxidation step is fed into the extraction step under given temperature and pressure conditions so as to maintain the cycloaliphatic hydrocarbon in the liquid state.

24. (Currently Amended) [[A]] The process according to Claim 20, wherein the extraction of the diacids is carried out under given temperature and pressure conditions so as to maintain the cycloaliphatic hydrocarbon in the liquid state.

25. (Currently Amended) [[A]] The process according to Claim 20, wherein the first extraction solvent is a polar solvent which is water or an alcohol.

26. (Currently Amended) [[A]] The process according to Claim 25, wherein the first extraction solvent is water.

27. (Currently Amended) [[A]] The process according to Claim 20, further

comprising the addition of a second extraction solvent to the extraction step, said second extraction solvent being non-miscible with the first extraction solvent, and not solubilizing the diacids formed.

28. (Currently Amended) [[A]] The process according to Claim 27 22,

wherein the first and the second extraction solvents are fed into the countercurrent extraction column.

29. (Currently Amended) [[A]] The process according to Claim 27, wherein the second extraction solvent is an acyclic hydrocarbon, a cyclic hydrocarbon, a saturated hydrocarbon, or an aromatic hydrocarbon.

30. (Currently Amended) [[A]] The process according to Claims 27, wherein the second extraction solvent is the cycloaliphatic hydrocarbon to be oxidized.

31. (Currently Amended) [[A]] The process according to Claim 22, wherein the oxidation reaction medium is fed into the extraction column at an intermediate position between the two ends of the column.

32. (Currently Amended) [[A]] The process according to claim 20, wherein the hydrocarbon is a cycloalkane.

33. (Currently Amended) [[A]] The process according to claim 20, wherein the cycloalkane is cyclohexane or cyclododecane.

34. (Currently Amended) [[A]] The process according to claim 20, wherein the solvent is a monocarboxylic acid that is lipophilic in nature, having from 7 to 20 carbon atoms.

35. (Currently Amended) [[A]] The process according to claim 20, wherein the lipophilic acid solvent is selected from the group consisting of hexanoic acid, heptanoic acid, octanoic acid, 2-ethylhexanoic acid, nonanoic acid, decanoic acid, undecanoic acid, dodecanoic acid, stearic acid (octadecanoic acid), 2-octadecylsuccinic acid, 1,5-ditert-butylbenzoic acid, 4-tert-butylbenzoic acid, 4-octylbenzoic acid, tert-butyl hydrogen orthophthalate, a naphthenic acid substituted with alkyl group, [[a]] an anthracenic acid substituted with alkyl groups, a substituted derivatives derivative of a phthalic acid, or a fatty diacid.

36. (Currently Amended) [[A]] The process according to claim 20, wherein the catalyst is a transition metal.

37. (Currently Amended) [[A]] The process according to Claim 36, wherein the catalyst ~~is based on~~ comprises manganese and the catalyst is used in combination with a co-catalyst which is comprising cobalt, chromium, zirconium, hafnium or iron alone or in combination.

38. (Currently Amended) [[A]] The process according to claim 20, wherein the dicarboxylic acids produced are adipic acid, succinic acid, glutaric acid,

dodecanedioic acid or a mixture thereof.

39. (New) The process of claim 28, wherein the second extraction solvent is fed into the countercurrent extraction column in a direction countercurrent to the first extraction solvent.